

REMARKS

Claims 1-25 are pending. Claims 1-25 have been rejected. Claims 1-4, 8 and 17 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention.

The amendments here presented are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. Support for the amendments herein presented can be found in the specification and claims as filed. No new matter has been introduced as a result of the amendments. Reconsideration and allowance is respectfully requested in view of the amendments and the following remarks.

The 35 U.S.C. § 112 Rejection

Claims 1-7 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. This objection is respectfully traversed.

The Office Action asserts that Claim 1 recites the limitation of “said switching process component” in page 25, line 13. The Office Action asserts that there is insufficient antecedent basis for this limitation in the claim. The Office Action asserts that for Claims 2-7 depend from rejected claim 1 rendering those dependent claims indefinite.

Claims 1, 8 and 17 have been amended to more particularly claim the subject matter. Specifically, the term “switching process component” has been uniformly used in the claims.

With this amendment, it is respectfully submitted the claims satisfy the statutory requirements.

The 35 U.S.C. § 102 Rejection

Claims 1-3, 8, 13, 15-17, 24 and 25 stand rejected under 35 U.S.C. § 102(e) as being allegedly unpatentable over Coss et al. (U.S. Patent No. 6,170,0125). This rejection is respectfully traversed.

In the Office Action at paper number 2, paragraph 6, the Office Action asserts as to claims 1, 2, 8, 13, and 17, that Coss discloses a “domain support engine,” which operates as a session manager operating within the firewall, and containing header and payload information (see figure 4), tracking session context, operating within the switching process (see column 5, line 35 to column 6, line 15). The DSE can create mini-sessions for additional, related transfers (see column 7, lines 24-33). The Office Action asserts for claims 3, 15, and 24, that rules are implemented to delete sessions and mini-sessions authorized by them after a timeout (see column 4, line 35 to column 5, line 33). The Office Action asserts for claims 16 and 25, that the invention disclosed by Coss can change rules dynamically (see column 8, lines 23-55). Applicants respectfully disagree with the assertions in the Office Action.

To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).

The Coss et al. reference discloses computer network firewalls that include one or more features for increased processing efficiency. The Coss et al. reference discloses a computer network firewall configured to utilize stateful packet filtering by storing in a

cache the results of rule processing as applied to one or more packets. The Coss et al. reference discloses stateful packet filtering being implemented by caching rule processing results for received packets and then utilizing the cached results to bypass rule processing for subsequent similar packets. The Coss et al. reference discloses at Figure 4 a hash table illustrating that the cache can include a session key, hardware address information, interface information, an alarm code, statistical information, and an applicable action. The Coss et al. reference at Figure 4 is silent with respect to payload information. The Coss et al. reference discloses a decision module called a domain support engine (DSE). The Coss et al. reference discloses that the (DSE) determines which security policy to use for a new network session. The Coss et al. reference discloses that each new session must be approved by the security policies of the source domain and the destination domain. The Coss et al. reference discloses that the DSE makes the domain selection based on the incoming or outgoing network interface, as well as on the source or destination network address of each packet. The Coss et al. merely discloses that for protocols of the type which require a separate additional network session, from the outside back to the user, such as for example, the protocol employed by ReaLAudio, a rule can include a condition or mask that allows a connection back to a user, but only if there is a proper forward connection concurrently active, i.e., a connection in which the source and destination addresses are interchanged. The Coss et al. reference is silent with respect to a mini-session comprises instantiated software modules residing in the same address space as the switching process component. (See Coss et al. at Abstract, column 5, lines 35-66, column 6, lines 1-15, column 7, lines 24-33).

The Coss et al. reference fails to disclose each and every claimed element. Specifically, the Coss et al. reference does not disclose “a firewall device having a plurality of communication interfaces, a packet filtering component coupled to each of the interfaces, a switching process component coupled to each of the interfaces, and a firewall services component coupled to the switching process component, a method for optimizing firewall processing comprising; providing a session manager in the firewall services component; providing a firewall module in the switching process component;

instantiating a session, by said session manager, for data transfers within the firewall device, said sessions having header and payload information related to data transfers within the firewall device; and instantiating a mini-session, by said session manager, corresponding to said instantiated session, said mini-session having header information related to data transfers within the firewall device, wherein said mini-session comprises instantiated software modules residing in the same address space as said switching process component, as claimed in claim 1. The Coss et al. reference does not disclose “a firewall device having a plurality of communication interfaces, a packet filtering component coupled to each of the interfaces, a switching process component coupled to each of the interfaces, and a firewall services component coupled to the switching process component, a method for optimizing firewall processing comprising; providing a session manager in the firewall services component; providing a firewall module in the switching process component; instantiating a session, by said session manager, for data transfers within the firewall device, said sessions having header and payload information related to data transfers within the firewall device; and instantiating a mini-session, by said session manager, corresponding to said instantiated session, said mini-session having header information related to data transfers within the firewall device, wherein said mini-session comprises instantiated software modules residing in the same address space as said switching process component, as claimed in claim 8. The Coss et al. reference fails to disclose “a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for optimizing firewall processing in a firewall device having a plurality of communication interfaces, a packet filtering component coupled to each of the interfaces, a switching process component coupled to each of the interfaces, and a firewall services component coupled to the switching process component, said method comprising; providing a session manager in the firewall services component; providing a firewall module in the switching component; instantiating a session, by said session manager, for data transfers within the firewall device, said sessions having header and payload information related to data transfers within the firewall device; and instantiating a mini-session, by said session manager, corresponding to said instantiated session, said mini-session having header

information related to data transfers within the firewall device, wherein said mini-session comprises instantiated software modules residing in the same address space as said switching process component, as claimed in claim 17.

The Coss et al. reference discloses at Figure 4 a hash table illustrating that the cache can include a session key, hardware address information, interface information, an alarm code, statistical information, and an applicable action. The Coss et al. reference at Figure 4 is silent with respect to payload information. The Coss et al. reference does not disclose mini-sessions as claimed. The Coss et al. merely discloses that for protocols of the type which require a separate additional network session, from the outside back to the user, such as for example, the protocol employed by ReaLAudio, a rule can include a condition or mask that allows a connection back to a user, but only if there is a proper forward connection concurrently active, i.e., a connection in which the source and destination addresses are interchanged. The Coss et al. reference is silent with respect to a mini-session comprising instantiated software modules residing in the same address space as the switching process component.

Since the prior art reference fails to disclose each and every claimed element, then the prior art reference fails to anticipate the claimed invention. In view of the foregoing, it is respectfully requested that the rejection be withdrawn and it is respectfully asserted that the claims are now in condition for allowance.

The 35 U.S.C. § 103 Rejection

Claims 4-7, 9-12, 18-22 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Coss et al. (U.S. Patent No. 6,170,0125) as applied to claims 1, 8, further in view of Blake et al., RFC 2475, "An Architecture for Differentiated Services," 1998. This rejection is respectfully traversed.

In the Office Action at paper number 5, paragraph 7, the Office Action asserts that the system disclosed by Coss supports a rule for a “tunnel option” (see column 6, lines 63-67), but does not teach the use of the tunnel option to bypass rules application downstream. The “Rules List” disclosed by Coss is an ACL, and one skilled in the art implements the bypassing of rules by using a single rule to “pass everything.”

The Office Action asserts that Blake teaches the use of the DS (Differentiated Services) field for conditioning traffic for streamlined downstream treatment (see pages 12 and 13), and further teaches the use of tunneling in order to deploy DS fields (see pages 28 and 29). The Office Action asserts that therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Coss by supporting DS fields in conjunction with the tunnel option, in order to condition traffic for downstream treatment.

Claims 14 and 23 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Coss et al. (U.S. Patent No. 6,170,0125). This rejection is respectfully traversed.

In the Office Action at paper number 5, paragraph 8, the Office Action asserts that Coss discloses several conditions under which sessions may be deleted, but does not explicitly state that sessions are to be deleted upon completion. The Office Action asserts that Official notice is given that the method of deleting completed processes upon completion in order to free memory and conserve CPU time is well-known in the art. The Office Action asserts that therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Coss deleting sessions and their associated mini-sessions upon completion in order to free memory and conserve CPU time. Applicants respectfully disagree with the assertions in the Office Action.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

As stated above the Coss et al. reference fails to teach or suggest each and every claimed element in at least independent claims 1, 8, and 17. The combination of the Blake et al. reference does not remedy the deficiency of the Coss et al. reference. Therefore the combination of the Coss et al. reference and the Blake et al. reference fails to teach or suggest each and every claimed element.

Since each and every claimed element is not taught or suggested by the combination of references, there is no *prima facie* case of obviousness.

Since the Office Action has been traversed and the rejection fails to make out a *prima facie* case of obviousness, Applicant respectfully requests that the Examiner provide specific citation and an Affidavit in support of the assertions in the Office Action that each and every claimed element is rendered obvious.

Dependent Claims

The argument and evidence set forth above is equally applicable here. Since the independent Claims 1, 8, and 17, are allowable, then the dependent Claims 2-7, 9-16, and 18-25 must also be allowable. If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988).

In view of the foregoing, it is respectfully requested that the rejection be withdrawn and it is respectfully asserted that the claims are now in condition for allowance.

Judicially-created Double Patenting

Claims 1-25 have been rejected pursuant to the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 7, 24 and 25 of prior United States Patent No. 6,219,706 to Fan et al. Submitted herewith is a Terminal Disclaimer executed by an attorney of record. Withdrawal of this rejection is respectfully requested.

Prior art made of record

The Office Action cited prior art of record but did not rely upon the prior art. Applicants have considered the prior art made of record and assert that the claimed invention is patentably distinct over prior art made of record.

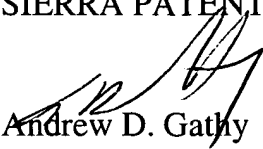
Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
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